

REMARKS

Claims 3, 4, and 6 have been previously canceled. Claims 1, 2, 5, and 7 have been amended. Claims 1, 2, 5, and 7 remain in the application.

Claims 1, 2, 5, and 7 were rejected under 35 U.S.C. § 102(b) as being anticipated by Longo et al. (U.S. Patent No. 3,723,165). Applicants respectfully traverse this rejection.

U.S. Patent No. 3,723,165 to Longo et al. discloses a mixed metal and high-temperature plastic flame spray powder and method of flame spraying same. A high temperature plastic powder is flame sprayed in admixture with about 5 – 99 weight percent, and preferably about 40 – 80 weight percent, of a flame spray metal powder by heating the mixture to a temperature sufficient to substantially melt the metal powder and surface heat-soften the high temperature plastic, and propelling the thus heated particles onto a surface, forming a coating. Examples of these high temperature plastics include the well known polyimide plastics, polyamide-polyimide plastics, the polyester imide plastics and the aromatic polyester plastics. Typical metal powders for mixing with the plastic are aluminum alloys, nickel alloys, copper, bronze, babbitt and stainless steels. Longo et al. does not disclose an article substrate, an inner layer thermally sprayed on the article substrate of a metal material having a first predetermined thickness, and an outer layer flame sprayed on the inner layer of a composite made of a polymer and the metal material having a second predetermined thickness.

In contradistinction, claim 1, as amended, clarifies the invention claimed as a thermally sprayed article including an article substrate and an inner layer of a metal material thermally sprayed on the article substrate having a first predetermined thickness. The thermally sprayed article also includes an outer layer flame sprayed on the inner layer of a composite made of a polymer and the metal material having a second predetermined thickness.

A rejection grounded on anticipation under 35 U.S.C. § 102 is proper only where the subject matter claimed is identically disclosed or described in a reference. In other words, anticipation requires the presence of a single prior art reference which discloses each and every element of the claimed invention arranged as in the claim. In re Arkley, 455 F.2d 586, 172 USPQ 524 (CCPA 1972); Kalman v. Kimberly-Clark Corp., 713 F.2d 760, 218 USPQ 781 (Fed. Cir. 1983); Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co., 730 F.2d 1452, 221 USPQ 481 (Fed. Cir. 1984).

Longo et al. '165 does not disclose or anticipate the claimed invention of claim 1. Specifically, Longo et al. '165 merely discloses a mixed metal and high-temperature plastic flame spray powder and method of flame spraying. Longo et al. '165 lacks an article substrate, an inner layer thermally sprayed on the article substrate of a metal material having a first predetermined thickness, and an outer layer flame sprayed on the inner layer of a composite made of a polymer and the metal material having a second predetermined thickness. In Longo et al. '165, the spraying may be effected on any surface or substrate and sprays a bond coat on the surface to adhere the admixture, but does not thermally spray a metal material against an article substrate to form an inner layer before flame spraying the admixture in which the metal material is the inner layer and the outer layer.] Longo et al. '165 fails to disclose the combination of a thermally sprayed article including an article substrate, an inner layer thermally sprayed on the article substrate of a metal material having a first predetermined thickness, and an outer layer flame sprayed on the inner layer of a composite made of a polymer and the metal material having a second predetermined thickness as claimed by Applicants. Therefore, it is respectfully submitted that claim 1 is allowable over the rejection under 35 U.S.C. § 102(b).

As to claim 2, claim 2, as amended, clarifies the invention claimed as a thermally sprayed article including an article substrate and an inner layer thermally sprayed on

the article substrate of a metal material having a first predetermined thickness. The thermally sprayed article also includes an outer layer flame sprayed on the inner layer of a composite made of a polymer and the metal material having a second predetermined thickness. The second predetermined thickness is less than the first predetermined thickness.

Longo et al. '165 does not disclose or anticipate the claimed invention of claim 2. Specifically, Longo et al. '165 merely discloses a mixed metal and high-temperature plastic flame spray powder and method of flame spraying. Longo et al. '165 lacks an article substrate, an inner layer thermally sprayed on the article substrate of a metal material having a first predetermined thickness, and an outer layer flame sprayed on the inner layer of a composite made of a polymer and the metal material having a second predetermined thickness with the second predetermined thickness being less than the first predetermined thickness. In Longo et al. '165, the spraying may be effected on any surface or substrate and sprays a bond coat on the surface to adhere the admixture, but does not thermally spray a metal material against an article substrate to form an inner layer before flame spraying the admixture in which the metal material is the inner layer and the outer layer. Longo et al. '165 fails to disclose the combination of a thermally sprayed article including an article substrate, an inner layer thermally sprayed on the article substrate of a metal material having a first predetermined thickness, and an outer layer flame sprayed on the inner layer of a composite made of a polymer and the metal material having a second predetermined thickness less than the first predetermined thickness as claimed by Applicants. Therefore, it is respectively submitted that claim 2 is allowable over the rejection under 35 U.S.C. § 102(b).

As to claim 5, claim 5, as amended, clarifies the invention claimed as a thermally sprayed article including an article substrate and an inner layer thermally sprayed on the article substrate of a metal material. The thermally sprayed article also includes an outer layer flame sprayed on the inner layer of a composite made of a polymer and the metal

material co-deposited to form the outer layer. The outer layer has a hardness less than the inner layer.

Longo et al. '165 does not disclose or anticipate the claimed invention of claim 5. Specifically, Longo et al. '165 merely discloses a mixed metal and high-temperature plastic flame spray powder and method of flame spraying. Longo et al. '165 lacks an article substrate, an inner layer thermally sprayed on the article substrate of a metal material having a first predetermined thickness, and an outer layer flame sprayed on the inner layer of a composite made of a polymer and the metal material having a second predetermined thickness with the outer layer having a hardness less than the inner layer. In Longo et al. '165, the spraying may be effected on any surface or substrate and sprays a bond coat on the surface to adhere the admixture, but does not thermally spray a metal material against an article substrate to form an inner layer before flame spraying the admixture in which the metal material is the inner layer and the outer layer. Longo et al. '165 fails to disclose the combination of a thermally sprayed article including an article substrate, an inner layer thermally sprayed on the article substrate of a metal material having a first predetermined thickness, and an outer layer flame sprayed on the inner layer of a composite made of a polymer and the metal material having a second predetermined thickness with the outer layer having a hardness less than the inner layer as claimed by Applicants. Therefore, it is respectively submitted that claim 5 is allowable over the rejection under 35 U.S.C. § 102(b).

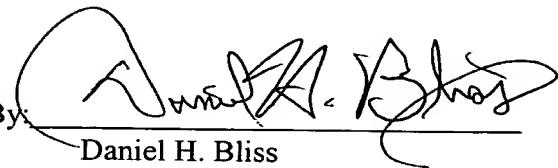
As to claim 7, claim 7, as amended, clarifies the invention claimed as a thermally sprayed article including an article substrate and an inner layer thermally sprayed on the article substrate of a metal material having a first predetermined thickness. The thermally sprayed article also includes an outer layer flame sprayed on the inner layer of a composite made of a polymer and the metal material co-deposited to form the outer layer and having a

second predetermined thickness less than the first predetermined thickness. The outer layer has a hardness less than the inner layer.

Longo et al. '165 does not disclose or anticipate the claimed invention of claim 7. Specifically, Longo et al. '165 merely discloses a mixed metal and high-temperature plastic flame spray powder and method of flame spraying. Longo et al. '165 lacks an article substrate, an inner layer thermally sprayed on the article substrate of a metal material having a first predetermined thickness, and an outer layer flame sprayed on the inner layer of a composite made of a polymer and the metal material having a second predetermined thickness with the outer layer having a hardness less than the inner layer. In Longo et al. '165, the spraying may be effected on any surface or substrate and sprays a bond coat on the surface to adhere the admixture, but does not thermally spray a metal material against an article substrate to form an inner layer before flame spraying the admixture in which the metal material is the inner layer and the outer layer. Longo et al. '165 does not disclose a thermally sprayed article including an article substrate, an inner layer thermally sprayed on the article substrate of a metal material having a first predetermined thickness, and an outer layer flame sprayed on the inner layer of a composite made of a polymer and the metal material having a second predetermined thickness with the outer layer having a hardness less than the inner layer as claimed by Applicants. Therefore, it is respectfully submitted that claim 7 is allowable over the rejection under 35 U.S.C. § 102(b).

Based on the above, it is respectfully submitted that the claims are in a condition for allowance or in better form for appeal. Applicants respectfully request reconsideration of the claims and withdrawal of the final rejection. It is respectfully requested that this Amendment be entered under 37 C.F.R. 1.116.

Respectfully submitted,

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